

## Claims

What is claimed is:

- 1        1. A method of processing audio-based data associated with a particular language,  
2        the method comprising the steps of:  
3                storing the audio-based data;  
4                generating a textual representation of the audio-based data, the textual  
5        representation being in the form of one or more semantic units corresponding to the audio-  
6        based data; and  
7                indexing the one or more semantic units and storing the one or more indexed  
8        semantic units for use in searching the stored audio-based data in response to a user query.
  
- 1        2. The method of claim 1, wherein the semantic unit is a syllable.
  
- 1        3. The method of claim 2, wherein the syllable is a phonetically based syllable.
  
- 1        4. The method of claim 1, wherein the semantic unit is a morpheme.
  
- 1        5. The method of claim 1, wherein the generating step comprises decoding the audio-  
2        based data in accordance with a speech recognition system.
  
- 1        6. The method of claim 5, wherein the speech recognition system employs a  
2        semantic unit based language model.
  
- 1        7. The method of claim 1, wherein the indexing step comprises time stamping the  
2        one or more semantic units.
  
- 1        8. The method of claim 1, wherein the searching step comprises:

2 processing the user query to generate one or more semantic units representing the  
3 information that the user seeks to retrieve;

4 searching the one or more indexed semantic units to find a substantial match with  
5 the one or more semantic units associated with the user query; and

6 retrieving one or more segments of the audio-based data using the one or more  
7 indexed semantic units that match the one or more semantic units associated with the user  
8 query.

1 9. The method of claim 8, wherein the searching step further comprises presenting  
2 the retrieved data to the user.

1 10. The method of claim 1, wherein the particular language is an Asian based  
2 language.

1 11. The method of claim 10, wherein the particular language is Chinese.

1 12. The method of claim 11, wherein the semantic unit is a Chinese character.

1 13. The method of claim 1, wherein the particular language is a Slavic based  
2 language.

1 14. The method of claim 1, wherein the one or more semantic units are indexed  
2 according to speaker attributes.

1 15. The method of claim 1, wherein the one or more semantic units are indexed  
2 according to at least one of when the audio based data was produced and where the audio  
3 based data was produced.

1           16. The method of claim 1, further comprising the step of storing video based data  
2           associated with the audio based data for use in searching the stored audio based data and  
3           the video based data in response to a user query.

1           17. The method of claim 16, wherein the searching step includes a hierarchical  
2           search routine.

1           18. The method of claim 1, wherein the generating step comprises stenographically  
2           transcribing the audio-based data to generate the textual representation.

1           19. Apparatus for processing audio-based data associated with a particular  
2           language, the apparatus comprising:

3           at least one processor operative to: (i) store the audio-based data; (ii) generate a  
4           textual representation of the audio-based data, the textual representation being in the form  
5           of one or more semantic units corresponding to the audio-based data; and (iii) index the  
6           one or more semantic units and store the one or more indexed semantic units for use in  
7           searching the stored audio-based data in response to a user query.

1           20. An audio-based data indexing and retrieval system for processing audio-based  
2           data associated with a particular language, the system comprising:

3           memory for storing the audio-based data;

4           a semantic unit based speech recognition system for generating a textual  
5           representation of the audio-based data, the textual representation being in the form of one  
6           or more semantic units corresponding to the audio-based data;

7           an indexing and storage module, operatively coupled to the semantic unit based  
8           speech recognition system and the memory, for indexing the one or more semantic units  
9           and storing the one or more indexed semantic units; and

10 a search engine, operatively coupled to the indexing and storage module and the  
11 memory, for searching the one or more indexed semantic units for a match with one or more  
12 semantic units associated with a user query, and for retrieving the stored audio based data  
13 based on the one or more indexed semantic units.

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